



KALRO staff review progress of development of superior maize varieties for high rainfall regions at KALRO Kitale.

KENYA

INTEGRATED AGRICULTURAL RESEARCH FOR DEVELOPMENT PROJECT

Despite the important role agriculture plays in the national economic development, its performance has been faced with several challenges that make problems of hunger and poverty persist despite efforts by various institutions to address them. The challenges have been severally documented in various policy documents and they include, among others, declining agricultural productivity against an increasing population, environmental degradation and underutilization of land resources, lack of effective value-addition of agricultural produce that constrain market access and inadequate technology application. To contribute to addressing the challenges, the Kenya Agricultural and Livestock Research Organization (KALRO) in partnership with the United States Agency for International Development (USAID) developed the Integrated Agricultural Research for Development (IARD) Project under the USAID Feed the Future initiative (FtF).

The IARD Project is aligned to the Global Hunger and Food Security Initiative which aims to reduce poverty and hunger through agricultural sector growth and improved nutritional status. The project focuses on three selected value chains which include staple food crops, dairy and horticulture in the twenty two FtF Counties. KALRO's interventions aim to improve food and nutritional security and commercialization efforts through development and promoting technologies and innovations. Additionally the project is also promoting sustainable natural resources management, as well as mitigation against climate change. This Project contributes to the Kenya Government's Big Four Agenda for growth in the health and food security pillars.

OUR WORK

The overall goal of the Integrated Agricultural Research for Development (IARD) project is to contribute to increased household income, food and nutritional security through generation and promotion of knowledge, information and technologies that respond to clients' demands and opportunities. The research agenda under the IARD Project seeks to address the identified constraints through targeted interventions in the selected value chains underpinned by biotechnology, natural resource management, socio economics and other cross-cutting arrangements. The approach is based on transfer of ready-to-go technologies which are matched with farmer and or end-user needs aimed at upgrading the value chains and moving towards commercialization. This approach is expected to improve uptake of staple crops, horticulture and dairy technologies and address constraints to increased productivity and food as well as nutritional insecurity.

ACHIEVEMENTS

To date, KALRO has achieved the following:

- Four maize varieties tolerant to Maize Lethal Necrosis Disease released. Two varieties licensed to Seedco and Ultravet seed companies.
- Ten metric tonnes of dryland, GLS resistant, and striga tolerant maize varieties multiplied and distributed to 3,505 farmers in the semi-arid and high rainfall areas.
- Four potential varieties; two each of cowpea and pigeon peas under national performance trials for formal release as gazetted varieties.
- Three million cassava clean cuttings and two million sweet potato vines distributed to 3,354 farmers in the target counties.
- Two potato lines submitted to Kenya Plant health inspectorate Service (KEPHIS) for national performance trials and 42 acres of basic seed potatoes of three popular varieties (Shangi, Dutch Robijn, and Kenya Karibu) multiplied to enhance potato seed availability.
- Training materials on greenhouse production, good agricultural practices, good nursery management practices, Integrated Pest Management developed and distributed to farmers.
- Thirty Training of Trainers and 503 farmers from 15 counties trained on greenhouse crop production.
- Over 50,000 seedlings of improved fruit trees and underutilized fruits distributed to 2,000 farmers.
- Six fruit tree mother blocks established in KALRO (Alupe, Kisii, Kakamega, Katumani) and Agricultural Training Centre in Busia and Bungoma.
- 1,983 operators and potential entrepreneurs from 11 counties trained on nursery management.
- Over 10,125 farmers in 22 counties trained on good agricultural practices, integrated pest management and integrated soil fertility management.
- Four *Brachiaria* forage potential varieties under National Performance trials (NPT) and Distinctness Uniformity and Stability Tests for formal release.
- Twenty metric tonnes of urea molasses blocks produced and availed to dairy farmers in Taita Taveta, Kisumu, and Nandi Counties for trial purposes.
- Four mixed feed rations based on crop by-products developed.
- Planting materials of Napier grass varieties resistant to head smut and stunting diseases distributed to 520 farmers in HR regions.
- Draft guidelines for management of milk contaminants and infertility in dairy cattle developed.
- Ongoing training of 34 students (11 masters and 23 doctorates) to improve research capacity.

Budget: \$7.9 million

DURATION: 2016 – 2029

Key Partners:

County Governments

- State Departments of Agriculture and Livestock
- Departments of Education
- Department of Veterinary Services

Implementing Partners:

- Kenya Plant Health Inspectorate Services
- Horticultural Crops Directorate
- KALRO Seed Unit
- Kenya Veterinary Vaccines Production Institute
- Dryland Seed Company
- SeedCo
- Ultravetis
- International Potato Centre
- International Livestock Research Institute
- University of Nairobi
- Dudutech Ltd.
- Agrotunnel Company Ltd
- G North and Sons Ltd.
- Fresh Produce Exporters Association of Kenya
- Youth Agency for Development of Science Technology and Innovation
- Bioversity International
- Food and Agriculture Organization (FAO)

CONTACT

Dr. Felister Makini
Deputy Director General, Crops
Tel: + 254-722-265-777
Email: Felister.Makini@kalro.org

Violet Kirigua
Coordinator Crops/Overall
Tel: +254-725-850-390
Email: Violet.Kirigua@kalro.org